

Working with colours



Colour Model



Graphic designers are in the position to accomplish the Company's public image. Thus, even with a low-profile product, companies are able to penetrate the market because of their successful marketing campaign comprising project planning, product branding, graphic designs and collaboration between the client and the marketing campaign team, presenting the product and the Company to the market.

Start learning from the beginning of the colour models.

Digital Imaging is the technology used to create and edit binary data on our computers. It is important that there are correctly formatted data in various applications where this data is added. These pages have focus on photo-editing and graphics fields. Whether it is a card, brochure, leaflet or an entire book, with photos and illustrations, we can make it a pleasure to read it. When preparing an online presentation or CD Media, composition properties will be different from that for printing jobs, in a way more easier to handle as what you see is what you get.

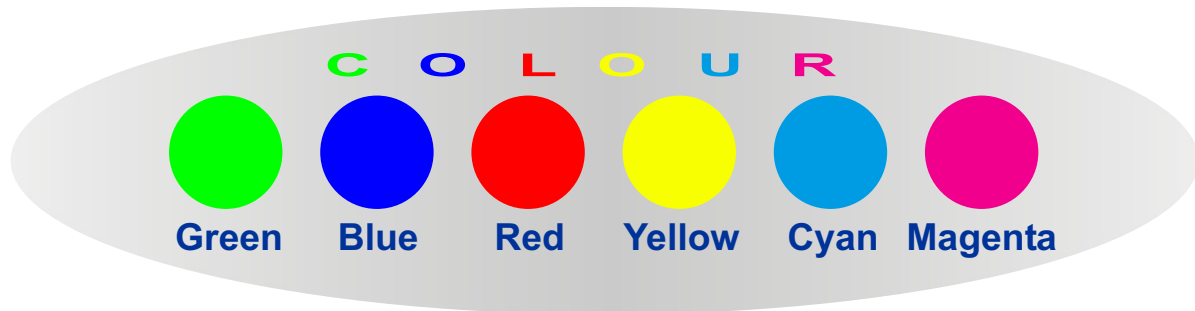
Colour mode, size of image, output resolution and image-file destination are all to be carefully considered before the starting of any new job. It is not advisable to change above attributes later, the image quality will suffer and deteriorate. Spend a good time for planning your image and give the right properties from the very beginning and you will not get any unexpected surprises in the end of your creation.

See: **WORKING WITH OBJECTS !**

There are plenty of image editing programs available and finding the right one that suits to your needs will be a tedious task but there is a one common thing with all of these programs, the basic image editing procedures that apply to all of them.

You can download the free image editing programs from the Internet.

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Get it right from the beginning and you won't be wasting your energy to figure out the facts that you should have considered since you started your project. Your workflow will be well organized and you will enjoy what you are doing with guaranteed high quality results.

CONVERT RGB colour mode to the CMYK colour mode before printing !

When you convert images from the RGB colour mode to the CMYK colour mode, you shift them to a smaller colour space, and this results in a loss of colour information. The colour of your RGB image may change noticeably.

COLOUR MODEL

Colour model is a method for representing colour.

Colours can be described using several different colour models.

RGB: Red, Green and Blue

CMYK: Cyan, Magenta, Yellow and Black

HSB: Hue, Saturation and Brightness

RGBA: Red, Green, Blue and Alpha

LAB: Luminance and two chromatic components: A - green to magenta B - blue to yellow.

RGB model creates colours by adding light, it is called an additive colour model.

Art of reproducing colour by adding 3-primary RGB-colours in varying proportions is called ADDITIVE mixing.

CMYK colour model creates colours by absorbing light, it is called a subtractive colour model.

CMYK-model is narrower than RGB. When RGB is converted to CMYK, colours seem to be "dirtier" and not so luminous. CMY are the 3-primary colours used in SUBTRACTIVE mixing. When CMY-colours are mixed, it produces BLACK or COMPOSITE BLACK (CMYK).

HSB colour model approximates the way the human eye perceives color. In the HSB model, color is defined by three components: **hue**, **saturation**, and **brightness**.

Hue determines color (yellow, orange, red, etc.);

Brightness determines perceived intensity (lighter or darker color); and

Saturation determines color depth (from dull to intense).

In the HSB color model, Hue (H) is expressed as a degree of rotation on a circular color wheel. Saturation (S) and brightness (B) are expressed as percentages of full intensity.

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RGBA model is used by Microsoft Image Composer (red, green, blue, and alpha) colour model, which includes transparency information on the alpha channel.

LAB or Lab (CIE L*a*b) is a colour model created by the Commission Internationale de l'Eclairage (CIE). It contains a luminance (or lightness) component (L) and two chromatic components: "a" (green to red) and "b" (blue to yellow). The Lab colour mode is based on the Lab colour model.

MATCHING OF COLOUR MODELS

It is a good idea to convert your graphic from its original RGB mode to CMYK before you print. To match RGB - screen colours into CMYK - print colours, it is necessary to use an intermediate step that is LAB - colour system.

1. **CMYK to > LAB to > RGB**
2. **RGB to > LAB to > CMYK**

Computer screens display their images using Red, Green and Blue (RGB) light. These colours make for beautiful displays on your screen. Your computer's monitor produces colours by combining red, green, and blue light. This means that the millions of colours that your monitor produces can all be described as amounts of red, green, and blue. These three colour components form the basis for the RGB (Red, Green and Blue) colour model. Because the RGB model is based on colours of light, higher RGB values correspond to greater quantities of light. Consequently, higher RGB values result in lighter colours. When all three colour components are at the maximum value, the resulting colour is white. RGB model creates colours by adding light, it is called an additive colour model.

However, if you try to print those RGB files directly, you may be in for an unpleasant surprise, since colour printers put the image on paper with the use of Cyan, Magenta, Yellow and Black (CMYK) inks. When the colours you see on your monitor are reproduced on paper, they are reproduced using ink instead of light. The most common method of reproducing colour images on paper is by combining cyan, magenta, yellow, and black inks. These four colours are the colour components of the CMYK (Cyan, Magenta, Yellow and black) colour model. Usually, each of the colours that make up the CMYK colour model are described as percentages (from 0 to 100).

Inks produce colour by reflecting certain colours of light while absorbing others. Darker inks absorb more light. Because the CMYK colour model is based on colours of ink, higher percentages of colour result in darker colours. In theory, when 100% cyan, 100% magenta, and 100% yellow are combined, the resulting colour is black. In reality, black ink must be added to the colour mode to compensate for the limitations of inks. Because the CMYK colour model creates colours by absorbing light, it is called a subtractive colour model.

So if you take the time to convert your files from RGB to CMYK using a commercial application like Corel and Adobe Photoshop before you print, your final results will be much, much better!

CHECK IMAGE COLOUR PROFILE OPTIONS ! (if applicable)